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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,231	07/14/2003	Wilbur H. Crawley	60,130-1786/03MRA0269	5823
26096	7590	07/20/2004	EXAMINER	
CARLSON, GASKEY & OLDS, P.C. 400 WEST MAPLE ROAD SUITE 350 BIRMINGHAM, MI 48009			PHAM, MINH CHAU THI	
			ART UNIT	PAPER NUMBER
			1724	

DATE MAILED: 07/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/619,231

Applicant(s)

CRAWLEY, WILBUR H.

Examiner

Minh-Chau T. Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7/14/03.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 6-8 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenberg (6,641,646 B2).

Rosenberg discloses a method for cleaning a particulate filter (10) including the steps of flowing a fluid into an outlet (14) of a particulate filter (10), dislodging ash from the filter with fluid and carrying the ash in the fluid through an inlet (15) of the filter (see col. 3, lines 50-56). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to apply a fluid to the filter outlet to back flush the filter as taught by Rosenberg to provide a novel filter cleaning device which is capable to thoroughly and efficiently cleaning filters.

Claims 2-5, 9, 10 and 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenberg (6,641,646 B2), in view of Davis et al (6,251,294 B1).

Claims 2-5, 9, 10 and 12-17 call for the step of sending acoustic waves such as ultrasonic waves through the fluid to assist in dislodging ash of the filter. Davis et al disclose a self generating filter unit wherein an ultrasonic transducer (36) periodically energizable to dislodge caked solids from a filter element housing (see col. 3, line 58 through col. 4, line 7 and col. 5, lines 18-23). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide an acoustic

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waves such as ultrasonic waves as taught by Davis et al in the filter apparatus of Rosenberg since the ultrasonic vibration would ultrasonically vibrate or cavitate the liquid surrounding the filter element and thus dislodge solid caked on the outside of the filter and effectively clean the filter element.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Copley (4,364,751) discloses a self-cleaning pulsed air cleaner.
- Gillingham et al (4,504,293) disclose a self-cleaning filter.
- Volk et al (4,624,689) disclose a shock wave generator for cleaning filter cartridges.
- Rosenberg (4,661,250) discloses a multiple-disc filter.
- Rosenberg et al (5,797,978) disclose an air filter.
- Santschi et al (5,837,017) disclose an apparatus for cleaning baghouse filters.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh-Chau T. Pham whose telephone number is (571) 272-1163. The examiner can normally be reached on Mon/Tues/Thur/Fri 7:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**Minh-Chau Pham**  
**Patent Examiner**  
**Art Unit : 1724**  
**July 16, 2004**